

## PATENT COOPERATION TREATY

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 16 MAR 2006

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Applicant's or agent's file reference 03/0412WO	<b>FOR FURTHER ACTION</b>		See Form PCT/IPEA/416																
International application No. PCT/US04/38198	International filing date (day/month/year) 15 November 2004 (15.11.2004)	Priority date (day/month/year) 01 December 2003 (01.12.2003)																	
International Patent Classification (IPC) or national classification and IPC IPC: <b>H04Q 7/00</b> (2006.01) USPC: 370/329																			
Applicant QUALCOMM INCORPORATED																			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of ___ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <table border="0"> <tr> <td><input checked="" type="checkbox"/> Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/> Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/> Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/> Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/> Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/> Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/> Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/> Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>				<input checked="" type="checkbox"/> Box No. I	Basis of the report	<input type="checkbox"/> Box No. II	Priority	<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/> Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/> Box No. VI	Certain documents cited	<input type="checkbox"/> Box No. VII	Certain defects in the international application	<input type="checkbox"/> Box No. VIII	Certain observations on the international application
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Date of submission of the demand 16 June 2005 (16.06.2005)		Date of completion of this report 18 February 2006 (18.02.2006)																	
Name and mailing address of the IPEA/ US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201		Authorized officer Chi Pham Telephone No. 571-272-3179																	

Form PCT/IPEA/409 (cover sheet)(April 2005)

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/US04/38198

## Box No. I Basis of the report

1. With regard to the language, this report is based on:

- ☒ the international application in the language in which it was filed.
- ☐ a translation of the international application into English, which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4(a))
- ☐ international preliminary examination (under Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ the international application as originally filed/furnished
- ☒ the description:
- pages 1-33 as originally filed/furnished
- pages\* NONE received by this Authority on \_\_\_\_\_
- pages\* NONE received by this Authority on \_\_\_\_\_
- ☒ the claims:
- pages 34-41 as originally filed/furnished
- pages\* NONE as amended (together with any statement) under Article 19
- pages\* NONE received by this Authority on \_\_\_\_\_
- pages\* NONE received by this Authority on \_\_\_\_\_
- ☒ the drawings:
- pages 1-10 as originally filed/furnished
- pages\* NONE received by this Authority on \_\_\_\_\_
- pages\* NONE received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to the sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/US04/38198**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)

Claims 4-8, 10-19, 21-24, 26-29, 31-36, and 38-45 YESClaims 1-3, 9, 20, 25, 30, and 37 NO

Inventive Step (IS)

Claims 4-8, 10-19, 21-24, 26-29, 31-36, and 38-45 YESClaims 1-3, 9, 20, 25, 30, and 37 NO

Industrial Applicability (IA)

Claims 1-45 YESClaims NONE NO2. Citations and Explanations (Rule 70.7)  
Please See Continuation Sheet

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

**V. 2. Citations and Explanations:**

Claims 1-3, 9, 20, 25, 30 and 37 lack novelty under PCT Article 33(2) as being anticipated by Zhang, H. et al (WO 03/010984 A1). Hereinafter, referred to as Zhang.

With respect to claims 1, 20, and 30, Zhang discloses a method for processing information in a communication system (Fig. 2), comprising:

partitioning a control channel (Fig. 2, F-CPCCH) used for transmitting control information into a plurality of subchannels, each subchannel being operated at a specific data rate (Fig. 2, F-CPCCH, bit 12 operates at  $\frac{1}{4}$  full rate);

selecting, for each of one or more user terminals, one of the subchannels to be used for transmitting control information from an access point to the respective user terminal, based on one or more selection criteria (Figs. 3-5, selected subchannels with data rate of 1,  $\frac{1}{4}$ ,  $\frac{1}{8}$ , or both depending whether the terminals are in active state or control hold state); and

transmitting control information from the access point to a particular user terminal on a particular subchannel selected for the respective user terminal (Fig. 2, F-CPCCH, power control bit 12<sup>th</sup>).

With respect to claim 2, Zhang discloses that wherein control information is transmitted in a segment of data frame specifically allocated for the control channel (Fig. 2, F-CPCCH, time slots 1 or 5).

With respect to claim 3, Zhang discloses that wherein each subchannel is associated with a specific set of operating parameters (Fig. 2, F-CPCCH, time slots 1 and 5 are used).

## Supplemental Box

With respect to claims 9, 25, and 37, Zhang discloses a method for processing information in a communication system (Fig. 2), comprising:

segregating a control channel into a plurality of subchannels each of which being operable at a specific data rate (Fig. 2, F-CPCCH, bit 12 operates at  $\frac{1}{4}$  full rate);

transmitting control information including resource allocation information from an access point to a user terminal on particular subchannel of the plurality of subchannels selected for the user terminal, based on one or more selection criteria (Fig. 2, F-CPCCH, power control information transmitted in bit 12<sup>th</sup> of time slots 1 and 5,  $\frac{1}{4}$  full data rate to terminals having control hold state); and

decoding, at the user terminal, one or more subchannels of the plurality of subchannels to obtain control information designated for the user terminal (page 13, lines 23-25, the MS in the control hold state monitors only these bits of the reduced rate power control subchannel assigned to it).

Claims 4-8, 10-19, 21-24, 26-29, 31-36 and 38-45 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a decoder to decode one or more control subchannels to obtain control information designated for a particular user terminal, starting with a subchannel operated at a lowest data rate, until at least one of a plurality of conditions is met, as specified in independent claims 34, 40, and 43.

Claims 1-45 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the claimed subject matter can be made or used in industry.

----- NEW CITATIONS -----

NONE